

When, however, the author remarks in conclusion, all the lines of curvature issuing from the umbilic are equally close to the osculating sphere, then these successive differentiations will either at length exhaust the coefficients, and thus no determinate equation will arise; or else they will conduct to an equation whose roots are all imaginary; and one or other of these circumstances must always take place at the vertex of a surface of revolution.

The Society adjourned over the Christmas Recess to meet again on the 10th January next.

January 10, 1839.

JOHN WILLIAM LUBBOCK, Esq., V.P. and Treas.,
in the Chair.

William James Frodsham, and John Hilton, Esquires, were severally elected Fellows of the Society.

A paper was read, entitled, "On the Laws of Mortality." By Charles Jellicoe, Esq. Communicated by P. M. Roget, M.D., Sec. R.S.

The author, considering that the variations and discrepancies in the annual decrements of life which are exhibited in the tables of mortality hitherto published were probably disappear, and that these decrements would follow a perfectly regular and uniform law, if the observations on which they are founded were sufficiently numerous, endeavours to arrive at an approximation to such a law, by proper interpolations in the series of the numbers of persons living at every tenth year of human life. The method he proposes, for the attainment of this object, is that of taking, by proper formulæ, the successive orders of differences, until the last order either disappears, or may be assumed equal to zero. With the aid of such differences, of which, by applying these formulæ, he gives the calculation, he constructs tables of the annual decrements founded principally on the results of the experience of the Equitable Assurance Society.

January 17, 1839.

JOHN FORBES ROYLE, M.D., V.P., in the Chair.

Beriah Botfield, and Peter Hardy, Esquires, were severally elected Fellows of the Society.

A paper was read, entitled, "On the state of the Interior of the Earth." By W. Hopkins, Esq. A.M., F.R.S., Second Memoir. "On the Phenomena of Precession and Nutation, assuming the Fluidity of the Interior of the Earth."